

Health-Related Components of Fitness

Muscular Strength – Muscular strength is the capacity of your body's muscles to generate extreme amounts of force in a short period of time utilizing anaerobic energy.

Anaerobic energy produces short term bursts of energy, and does not require oxygen. Instead anaerobic energy comes from the burning of carbohydrates, and can be sustained for several minutes, after which a short rest time is needed to replenish the system. Anaerobic energy is used for everything from weight lifting and sprinting, to the low impact sports of tennis and golf. Anaerobic energy is also used within aerobic-centered workouts when additional spurts of energy are needed.

Enhanced muscular strength often increases muscle and connective tissue size and density by enlarging cells, or "building" muscles. Larger muscles and connective tissues are less prone to accidents and aid long term weight control, since muscle tissue burns more calories than fat, even while resting.

Tips for Building Muscular Strength

- ⦿ Stagger exercises. Concentrate on activities that work specific muscle groups. Work slowly with concentration on form and resistance to gravity. Directed energy provides the best effect, while helping to avoid injury.
- ⦿ Anaerobic activity produces lactic acid build-up in muscle tissue, which can be temporarily painful. Stretching before and after workouts can prevent this condition.
- ⦿ Like aerobic workouts, gradual progression of stress on muscles will increase muscular strength. Again, moderation is key to avoiding injury and realizing benefits.
- ⦿ A warm-up is crucial to any workout.
- ⦿ Rest. One or two days of recovery time for each muscle group is necessary for maximum effect and injury prevention.

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Muscular Endurance - Muscle Endurance is the measure of how well muscles can repeatedly generate force, and the amount of time they can maintain activity. It is crucial for every fitness activity, from the mostly anaerobic weight lifting repetitions (or "reps") to intense aerobic activities like jogging (where specific muscles in the legs are used repeatedly.) Muscular endurance combines both aerobic and anaerobic energy.

Tips for Building Muscular Endurance

- Ⓢ Like [aerobic endurance](#) and [muscular strength](#), muscular endurance is increased through overload. Overworking the muscles makes them stronger and gives them more endurance.
- Ⓢ When weight lifting, averaging three sets of 12-15 lift repetitions is an excellent way to build endurance.
- Ⓢ Rest in between workouts.

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Flexibility - Flexibility is the ability to stretch your muscles as well as the tendons and ligaments that connect the muscles to your bones. An increase in flexibility occurs by stretching the elastic fibers beyond their usual limits and maintaining that stretch. The fibers will eventually adjust to these new limits. Stretches should be held for 30 seconds to acquire full benefit from that particular stretch, several sets for each muscle group should also be attained. For example, 3 X 30 seconds for each muscle group in the body would be an accurate method of stretching pre and post workout.

Increased flexibility decreases the risk of injury while exercising, and increases your exercise performance. Certain activities, such as swimming and yoga, require greater flexibility than others.

Types of Stretching

Tips for Increasing Flexibility

- Ⓢ You should stretch before a workout, but after warming up. Warmed-up muscles will be more limber, and less at risk for rips or pulls.
- Ⓢ Stretching after a workout helps relax strained muscles and prevent cramping.
- Ⓢ Stretching should never be painful. Stretch gently so you feel it, but not so much that you feel it hurt.
- Ⓢ For maximum results, stretch regularly, several times a day, at least five days a week.

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Body Composition - Body composition describes the percentages of fat, bone and muscle in your body. These percentages provide an overall view of your health and

fitness in relation to your weight, health, and age. A higher percentage of fat in relation to the bone and muscle build up poses health risks ranging from heart disease, high blood pressure and diabetes.

| Classification | Women (% fat) | Men (% fat) |
|----------------|---------------|-------------|
| Essential Fat | 10-12% | 2-4% |
| Athletes | 14-20% | 6-13% |
| Fitness | 21-24% | 14-17% |
| Acceptable | 25-31% | 18-25% |

* American Council on Exercise

Body Composition Basics

- ⦿ A healthy male's body should be approximately 6 percent to 13 percent fat. In females the number is slightly higher; approximately 14 percent to 20 percent fat.
- ⦿ Knowing your body composition can help you formulate an exercise program and set sensible fitness goals. Resolving to turn fat into muscle (and not simply to lose weight) motivates you to work on fat-burning aerobic activities and anaerobic muscle-building activities as well. Either way, you are changing your overall body composition from less fat to more muscle.
- ⦿ Avoid being "underfat." Body fat *does* have some benefits, absorption of vitamins and storage of energy sources are most important for fat consumption.

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Aerobic Endurance - Aerobic Endurance is the body's ability to exercise whole muscle groups over an extended period of time at moderate intensity, utilizing aerobic energy. Your aerobic system uses oxygen to break down carbohydrates and convert them into lasting energy. Since it's a prolonged need, fats and proteins are also broken down, making aerobic workouts ideal for fat loss.

Aerobic exercise also increases heart rate, strengthening the heart's ability to contract. Stronger contractions mean an improved, stronger blood flow, in turn making a body better equipped for exercise.

Tips for Building Aerobic Endurance

- ⦿ Maintain your workout for at least 15-30 minutes at your [target heart rate](#).
- ⦿ If you are having trouble maintaining 30 minute workouts, try staggering three 10 minute shifts throughout the day.
- ⦿ Workout at least 3-4 times a week for lasting effects.
- ⦿ Slowly increase your aerobic activities over a period of time to improve performance. Generally the more aerobic demands you make on your body, the stronger it gets. But be moderate. Slow increases will help avoid injury.
- ⦿ Rest. The body needs time to recover and grow. Alternating days and staggering intensity of workout can aid in your overall development and prevent injury. Paying attention to your body's messages -- soreness, tension, aches -- can help you figure out when to work and when to rest.

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Fitness can be defined in many different ways. To some people fitness might mean a slim waistline. To others it could be the ability to bench-press their body weight. And to others it might be a general feeling of wellness.

When you think of fitness, it's important to look at the big picture. It's not just about strength, endurance or fat content, but a combination of all these. You might be strong but have no endurance. You might have endurance but have little flexibility.

What you want to strive for is balance. Listed below are five key components important to a good definition of fitness. Consider areas where you are strong and the areas where you are weak. Strive to improve in all these areas, because the results will permeate your overall well-being.

- Ⓢ Muscular Strength
- Ⓢ Muscular Endurance
- Ⓢ Flexibility
- Ⓢ Body Composition
- Ⓢ Aerobic Endurance